What is claimed is:

1. A fluid composition for use in refrigerators, which consists of a chlorine-free fluor carbon refrigerant and a refrigerator oil, and said refrigerator oil consists 5 of: a base oil

a pentaerythritol ester of formula (1)

$$\begin{array}{c|c}
R & C - O - CH_2 \\
R & C - O \\
R & C - O
\end{array}$$

$$\begin{array}{c|c}
CH_2O - CR^2 \\
O \\
CH_2O
\end{array}$$

$$\begin{array}{c|c}
CR^4 \\
O \\
CR^4
\end{array}$$

$$\begin{array}{c|c}
CR^4 \\
O \\
O
\end{array}$$

$$\begin{array}{c|c}
CR^4 \\
O
\end{array}$$

$$\begin{array}{c|c}
CR^4 \\
O
\end{array}$$

$$\begin{array}{c|c}
CR^4 \\
O
\end{array}$$

wherein R^1-R^4 are identical with or different from 15 each other and are each a/member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched- ϕ hain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3; and

20 0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters. No Kamatic Micasay!

2. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of:

a pentaerythritol ester of formula (1)

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wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group

15 consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes; and

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds,

alicyclic epoxy compounds and epoxidized fatty acid monoesters.

3. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant 5 and a refrigerator oil, and said refrigerator oil consists of:

a pentaerythritol ester of formula (1)

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wherein R^1-R^4 are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branghed-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds,

25 alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, ary voxirane compounds, alkyloxirane compounds,

alicyclic epoxy compounds and epoxidized fatty acid monoesters; and

at least one additive selected from the group consisting of phenol antioxidants, amine antioxidants, wear resistant additives, extreme pressure agents, oiliness antiforming agents and metal inactivators.

4. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists

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a pentaerythrito # ester of formula (1)

wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

25 0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy

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compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid

5 monoesters; and

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters.

5. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of:

a pentaerythrito ester of formula (1)

wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes;

0.1-5% by weight based on the total amount of said refrigerator oil of at least one enoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters; and

at least one additive selected from the group consisting of phenol antioxidants, amine antioxidants, wear resistant additives, extreme pressure agents, oiliness Antiforming agents and metal inactivators.

6. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of:

a pentaerythritol ester of formula (1)

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wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylyenzenes;

o.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters; and

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters.

7. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists

a pentaerythritol ester of formula (1)

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25 of:

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wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

15 refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters;

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters; and

at least one additive selected from the group consisting of phenol antioxidants, amine antioxidants, wear

resistant additives, extreme pressure agents, oiliness antifoaming agents and metal inactivators.

8. A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant 5 and a refrigerator oil, and said refrigerator oil consists of:

a pentaerythritol ester of formula (1)

wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes;

25 refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds,

alkylglycidyl ether epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters;

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters; and

at least one additive selected from the group consisting of phenol antioxidants, amine antioxidants, wear resistant additives, extreme pressure agents, oiliness improvers, antiforming agents and metal inactivators.

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